

Work Order ID 91653

91653

Page 1

October-18-12 9:56:32 AM

Item ID: D2995

Accept

N900040100

Setup Start ***NS1***

Revision ID:

Stop ***NS2***

Item Name: Bearpaw, 500

Start Date: 10/11/12 Start Qty: 4.00

4

Cust Item ID:

Required Date: 11/02/12 Req'd Qty: 4.00

4

Customer:

Reference:

Approvals:

Process Plan:

R

Date: *12-10-18*

Tooling:

Date:

Run Start ***NR1***

QC:

Date:

SPC (Y/N):

Date:

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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Draw Nbr

Revision Nbr

D2995

Rev A1

110

0.00

110

FLOW WATER JET

Waterjet

Memo

0.00

FLOW CNC Waterjet

CUT BLANK AS PER FILE D2995

UHMW 1"

4 0 Jm 12-10-19

120

0.00

120

HAAS CNC VERTICAL MACHINING #1

HAAS 1

Memo

0.00

HAAS CNC vertical machine #1

Inspect material for defects or damage prior to machining Machine as per folio FA119Deburr

DAS 02 2-89

4 0 Jm 12-10-19

130

0.00

130

QC2- Inspect parts off machine FAI/FAIB

QC

Memo

0.00

Quality Control

DAS 02 2-89

4 12-10-24 (x4)

NCR: Yes / No

WORK ORDER NON-CONFORMANCE / UPDATE

DQA: _____ Date: _____

QA Closed: _____ Date: _____

Work Order: _____ Part No. _____ NCR No. _____				DISPOSITION Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Work Order Update <input type="checkbox"/>		AGAINST DEPARTMENT/PROCESS <div style="display: flex; justify-content: space-between;"> <div> Skid-tube <input type="checkbox"/> Machining <input type="checkbox"/> Thermoforming <input type="checkbox"/> Large Fab <input type="checkbox"/> </div> <div> Crosstube <input type="checkbox"/> Small Fab <input type="checkbox"/> Finishing <input type="checkbox"/> Composite <input type="checkbox"/> </div> <div> Water Jet <input type="checkbox"/> Prod. Eng. Coord. <input type="checkbox"/> Rec/Store/Packaging <input type="checkbox"/> Supplier <input type="checkbox"/> </div> <div> Engineering <input type="checkbox"/> Quality <input type="checkbox"/> Other <input type="checkbox"/> </div> </div>					
Root Cause		Date	Step	Qty	Description of work order update or Non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector	
Doc/Data	<input type="checkbox"/>										
Equip/Tooling	<input type="checkbox"/>										
Operator	<input type="checkbox"/>										
Material	<input type="checkbox"/>										
Setup	<input type="checkbox"/>										
Other	<input type="checkbox"/>										
Process	<input type="checkbox"/>										
Supplier	<input type="checkbox"/>										
Training	<input type="checkbox"/>										
Unapproved	<input type="checkbox"/>										

FAULT CATEGORY				
Landing Gear <input type="checkbox"/> Bending <input type="checkbox"/> Centre Not Concentric to O/S <input type="checkbox"/> Cracks <input type="checkbox"/> Crushed/Crimped <input type="checkbox"/> Cuffs <input type="checkbox"/> Heat Treat <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Ripples in Bend <input type="checkbox"/> Torque Waves in Extrusion <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube	General <input type="checkbox"/> Bend <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damaged <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Countersink <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Drill Holes <input type="checkbox"/> Drawing <input type="checkbox"/> Finish <input type="checkbox"/> Folio	<input type="checkbox"/> Grain <input type="checkbox"/> Hardware <input type="checkbox"/> Inspection Incomplete <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Maintenance <input type="checkbox"/> Mislabeled <input type="checkbox"/> Misread <input type="checkbox"/> Offset <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence <input type="checkbox"/> Outside Dimensions	<input type="checkbox"/> Ovalized <input type="checkbox"/> Over/Under tolerance <input type="checkbox"/> Part Incorrect <input type="checkbox"/> Part Lost/Missing <input type="checkbox"/> Part Moved <input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Power Loss/Surge	<input type="checkbox"/> Pressure/Forced <input type="checkbox"/> Temperature/Cure <input type="checkbox"/> Weld <input type="checkbox"/> Wrong Stock Pulled <input type="checkbox"/> Other

Work Order ID 91653



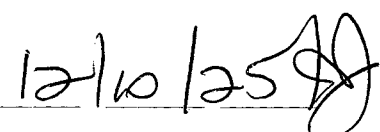
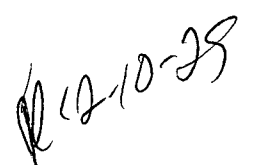
October-18-12 9:56:32 AM

91653

Page 2

Item ID: D2995 Accept ***N900040100*** Setup Start ***NS1***
 Revision ID: Stop ***NS2***
 Item Name: Bearpaw, 500
 Start Date: 10/11/12 Start Qty: 4.00 ***4*** Cust Item ID:
 Required Date: 11/02/12 Req'd Qty: 4.00 ***4*** Customer:
 Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
140 *140* QC Quality Control	QC8- Inspect parts - second check Memo	0.00 0.00		12/10/24		4	0		
150 *150* Packaging Packaging	Identify as per dwg & Stock Location: _____ Memo	0.00 0.00							
160 *160* QC Quality Control	QC21- Final Inspection - Work Order Release Memo	0.00 0.00							 

NCR: Yes / No

WORK ORDER NON-CONFORMANCE / UPDATE

DQA: _____ Date: _____

QA Closed: _____ Date: _____

Work Order: _____ Part No. _____ NCR No. _____				DISPOSITION Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Work Order Update <input type="checkbox"/>		AGAINST DEPARTMENT/PROCESS <div style="display: flex; justify-content: space-between;"> <div> Skid-tube <input type="checkbox"/> Machining <input type="checkbox"/> Thermoforming <input type="checkbox"/> Large Fab <input type="checkbox"/> </div> <div> Crosstube <input type="checkbox"/> Small Fab <input type="checkbox"/> Finishing <input type="checkbox"/> Composite <input type="checkbox"/> </div> <div> Water Jet <input type="checkbox"/> Prod. Eng. Coord. <input type="checkbox"/> Rec/Store/Packaging <input type="checkbox"/> Supplier <input type="checkbox"/> </div> <div> Engineering <input type="checkbox"/> Quality <input type="checkbox"/> Other <input type="checkbox"/> </div> </div>					
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Doc/Data <input type="checkbox"/>											
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Material <input type="checkbox"/>											
Setup <input type="checkbox"/>											
Other <input type="checkbox"/>											
Process <input type="checkbox"/>											
Supplier <input type="checkbox"/>											
Training <input type="checkbox"/>											
Unapproved <input type="checkbox"/>											

FAULT CATEGORY				
Landing Gear <input type="checkbox"/> Bending <input type="checkbox"/> Centre Not Concentric to O/S <input type="checkbox"/> Cracks <input type="checkbox"/> Crushed/Crimped <input type="checkbox"/> Cuffs <input type="checkbox"/> Heat Treat <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Ripples in Bend <input type="checkbox"/> Torque Waves in Extrusion <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube	General <input type="checkbox"/> Bend <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damaged <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Countersink <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Drill Holes <input type="checkbox"/> Drawing <input type="checkbox"/> Finish <input type="checkbox"/> Folio	<input type="checkbox"/> Grain <input type="checkbox"/> Hardware <input type="checkbox"/> Inspection Incomplete <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Maintenance <input type="checkbox"/> Mislabeled <input type="checkbox"/> Misread <input type="checkbox"/> Offset <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence <input type="checkbox"/> Outside Dimensions	<input type="checkbox"/> Ovalized <input type="checkbox"/> Over/Under tolerance <input type="checkbox"/> Part Incorrect <input type="checkbox"/> Part Lost/Missing <input type="checkbox"/> Part Moved <input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Power Loss/Surge	<input type="checkbox"/> Pressure/Forced <input type="checkbox"/> Temperature/Cure <input type="checkbox"/> Weld <input type="checkbox"/> Wrong Stock Pulled <input type="checkbox"/> Other

Picklist Print

October-18-12 9:56:32 AM

Page 1

Work Order ID: 91653

Parent Item: D2995

Parent Item Name: Bearpaw, 500

Start Date: 10/11/12

Required Date: 11/02/12

Start Qty: 4.00

Required Qty: 4.00

Comments: IPP A01.03.07New IssueEC
IPP Rev:B New Manufacturing Process 08-11-15 JLM Verified By:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
---------------------------------	------------------------	---------------	-------------	---------------------	------------------	-----------------	--------------------	----------------	-------------	--------------	---------------	----------------	--------

MUHMWB10
UHMW 1" Black

Purchased

No

110

sf

316.2575

3.4

14.31579
14.5

Jim 12-10-19

Location

Loc Qty

Loc Code

MAT018

297.41

118814

0

121346

26.1

121954

9.8

122286

14.3

122575

23.8

122722

76.41

123229

147

123229

ST052

18.84749474

121277

12.8

121278

6.04749474

NCR: Yes / No

WORK ORDER NON-CONFORMANCE / UPDATE

DQA: _____ Date: _____

QA Closed: _____ Date: _____

Work Order: _____ Part No. _____ NCR No. _____				DISPOSITION <div style="display: flex; justify-content: space-around;"> <div> Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Work Order Update <input type="checkbox"/> </div> <div> Skid-tube <input type="checkbox"/> Machining <input type="checkbox"/> Thermoforming <input type="checkbox"/> Large Fab <input type="checkbox"/> </div> <div> Crosstube <input type="checkbox"/> Small Fab <input type="checkbox"/> Finishing <input type="checkbox"/> Composite <input type="checkbox"/> </div> <div> Water Jet <input type="checkbox"/> Prod. Eng. Coord. <input type="checkbox"/> Rec/Store/Packaging <input type="checkbox"/> Supplier <input type="checkbox"/> </div> <div> Engineering <input type="checkbox"/> Quality <input type="checkbox"/> Other <input type="checkbox"/> </div> </div>		AGAINST DEPARTMENT/PROCESS <div style="display: flex; justify-content: space-around;"> <div> Skid-tube <input type="checkbox"/> Machining <input type="checkbox"/> Thermoforming <input type="checkbox"/> Large Fab <input type="checkbox"/> </div> <div> Crosstube <input type="checkbox"/> Small Fab <input type="checkbox"/> Finishing <input type="checkbox"/> Composite <input type="checkbox"/> </div> <div> Water Jet <input type="checkbox"/> Prod. Eng. Coord. <input type="checkbox"/> Rec/Store/Packaging <input type="checkbox"/> Supplier <input type="checkbox"/> </div> <div> Engineering <input type="checkbox"/> Quality <input type="checkbox"/> Other <input type="checkbox"/> </div> </div>					
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FAULT CATEGORY				
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DART AEROSPACE LTD		Work Order:	91653
Description: Bearpaw		Part Number:	D2995
Inspection Dwg: D2995	Rev: A1	Page 1 of 1	

FIRST ARTICLE INSPECTION CHECKLIST

☒ First Article ☐ Prototype

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
0.625	+/-0.010	.634	✓		vern	RT-4
0.250	+/-0.010	.253	✓			
R0.25	+/-0.030	.250			rad gauge	
0.25 x 45°	+/-0.030 x 0.5°	.254	✓			
5.86	+/-0.030	5.863	✓			
0.950	+/-0.010	.945	✓			
0.433	+/-0.010	.434	✓			
19.00	+/-0.030	19.000	✓		Tape	RT-10
4.25	+/-0.030	4.255	✓			
3.63	+/-0.030	3.627	✓			
7.375	+/-0.010	7.375	✓			
11.625	+/-0.010	11.625	✓			
0.38	+/-0.030	.380	✓			
3.081	+/-0.010	3.081	✓			
17.73	+/-0.030	17.730	✓			
19.34	+/-0.030	19.340	✓			
Ø0.260	+0.006/-0.001	.261	✓			
0.30	+0.030/-0.000	.309	✓			
Ø0.93	+/-0.030	.924	✓			

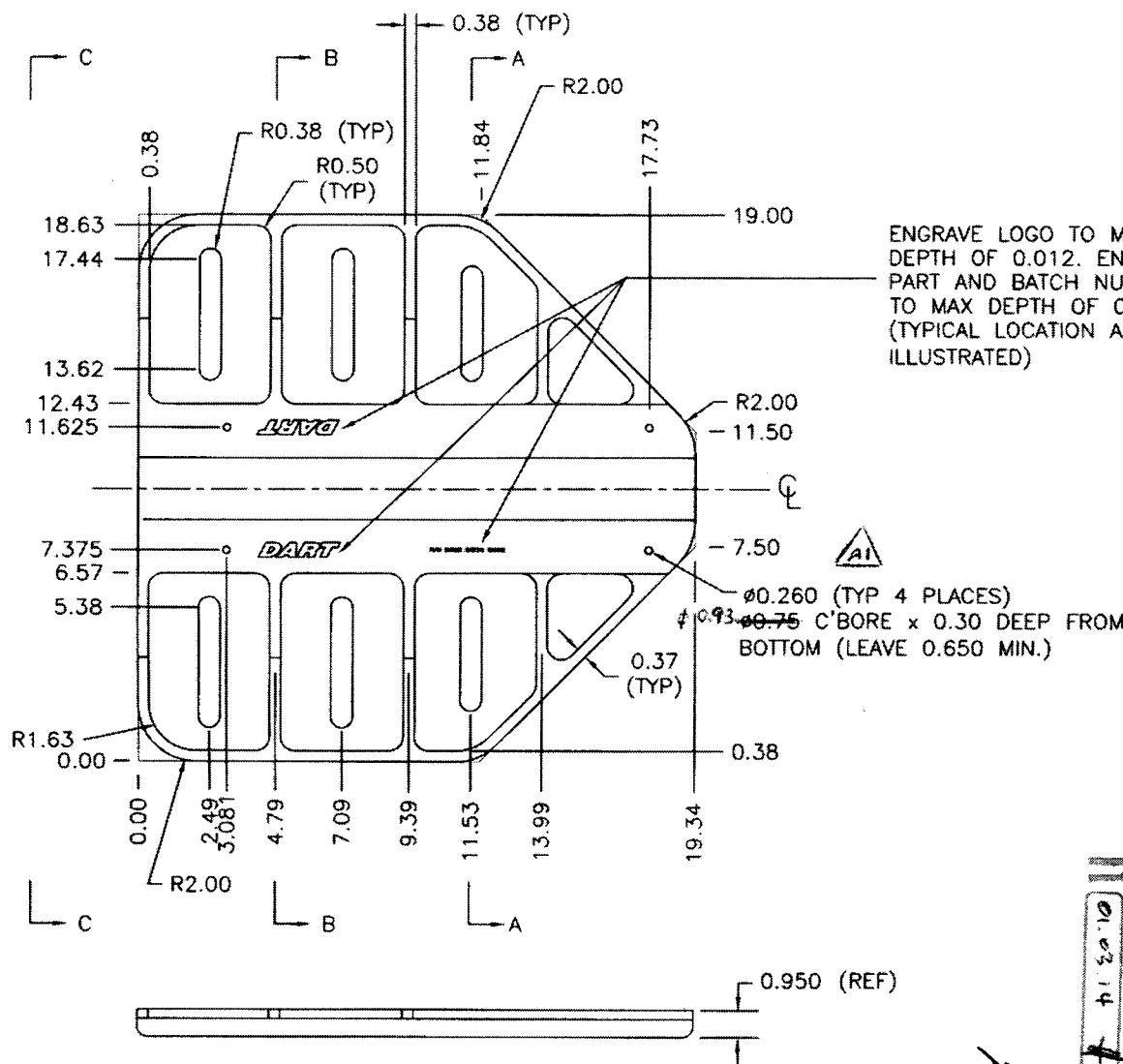
Measured by: <i>RT-025</i>	Audited by: <i>DAS 14 9-89</i>	Prototype Approval:	N/A
Date: 12-10-24	Date: 12/10/24	Date:	N/A

Rev	Date	Change	Revised by	Approved
A	06.10.02	New Issue	KJ/JLM	
B	09.05.19	Tolerances revised	KJ	



DESIGN	DRAWN BY	DART AEROSPACE LTD
CP	CP	HAWKESBURY, ONTARIO, CANADA
CHECKED	APPROVED	DRAWING NO.
AI	AI	D2995
DATE	TITLE	SHEET 1 OF 2
01.02.23	BEARPAW	SCALE 1:6
A	01.02.23	NEW ISSUE
AI	03.01.06	0.93 WAS 0.75

ENGRAVE LOGO TO MAX DEPTH OF 0.012. ENGRAVE PART AND BATCH NUMBERS TO MAX DEPTH OF 0.010. (TYPICAL LOCATION AS ILLUSTRATED)



BEARPAW IS SYMMETRIC ABOUT CENTERLINE (EXCEPT FOR ENGRAVING)
MATERIAL: UHMW BLACK PER SPEC CONTROL DRAWING D2689

1.00 THICK (MACHINE TO 0.950)

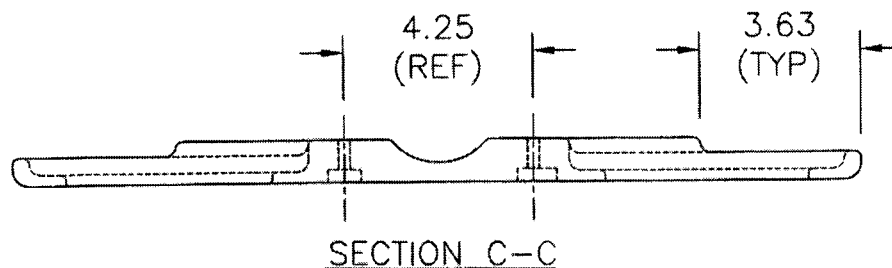
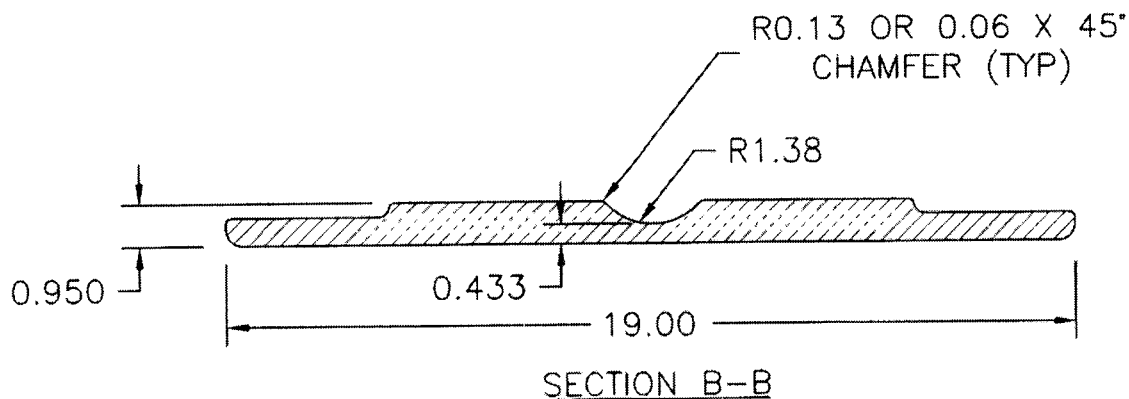
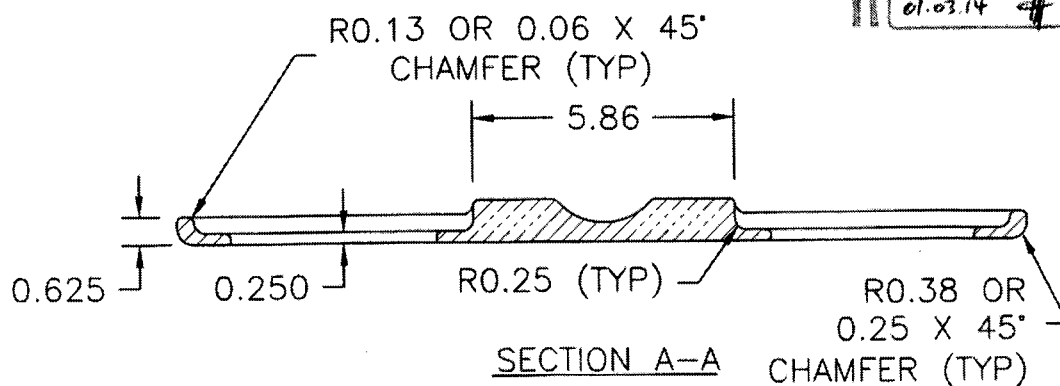
TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED



DESIGN <i>CP</i>	DRAWN BY <i>CP</i>	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED <i>A</i>	APPROVED <i>A</i>	DRAWING NO. D2995	REV. A SHEET 2 OF 2
DATE 01.02.23		TITLE BEARPAW	SCALE 1:4

91653

RELEASED
01.03.14 *A*



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